

WHAT IS CLAIMED IS:

1. A matching unit used for a semiconductor plasma processing apparatus including an electrode provided inside a chamber and a feeding line having its one terminal connected to said electrode and having its other terminal arranged outside said chamber, comprising:

5 a first capacitor receiving a high-frequency voltage at its one electrode and receiving a reference voltage at its other electrode, a capacitance value of said first capacitor being adjustable;

10 a second capacitor receiving said high-frequency voltage at its one electrode, a capacitance value of said second capacitor being adjustable; and

15 a distributed constant circuit connected between other electrode of said second capacitor and the other terminal of said feeding line for delaying a phase of said high-frequency voltage by a length substantially equal to a length in which a length of said feeding line is subtracted from a natural number multiple of 1/2 wavelength of said high-frequency voltage.

2. The matching unit according to claim 1, wherein said distributed constant circuit includes a coaxial line of a prescribed length connected between the other electrode of said second capacitor and the other terminal of said feeding line.

3. The matching unit according to claim 1, further comprising a shield case accommodating said first capacitor, said second capacitor and said distributed constant circuit, wherein said distributed constant circuit includes

5 a metal plate of a prescribed length connected between the other electrode of said second capacitor and the other terminal of said feeding line, at least part of said metal plate being provided facing to an inner wall of said shield case, and

10 a dielectric member arranged between said at least part of said metal plate and said inner wall of said shield case.

4. The matching unit according to claim 3, wherein
said distributed constant circuit further includes an adjusting
portion for adjusting a distance between said at least part of said metal
plate and said inner wall of said shield case and/or the length of said metal
plate.

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